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GRANDHI et al.(10) **Pub. No.: US 2021/0284944 A1**(43) **Pub. Date: Sep. 16, 2021**(54) **HIGH-THROUGHPUT MULTI-ORGAN
PERFUSION MODELS**(71) Applicant: **Novartis AG**, Basel (CH)(72) Inventors: **Taraka Sai Pavan GRANDHI**, San
Diego, CA (US); **Scott HAMMACK**,
San Diego, CA (US); **Shane**
HORMAN, Encinitas, CA (US); **Cody**
SCANDORE, San Francisco, CA (US);
Gary SEEBOLD, Santee, CA (US)(21) Appl. No.: **17/332,166**(22) Filed: **May 27, 2021****Related U.S. Application Data**(63) Continuation of application No. PCT/IB2019/
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29, 2018.**Publication Classification**(51) **Int. Cl.****C12M 1/42** (2006.01)**C12M 1/32** (2006.01)**C12M 1/00** (2006.01)**C12M 1/12** (2006.01)(52) **U.S. Cl.**CPC **C12M 35/04** (2013.01); **C12M 23/12**(2013.01); **C12M 25/04** (2013.01); **C12M****37/04** (2013.01); **C12M 23/40** (2013.01)

(57)

ABSTRACT

The invention provides a fluidic device that comprises at least two separate testing units, each of which is adapted to expose living cells to a moving fluid. The fluidic devices are useful for testing cell types such as kidney cells that are sensitive to shear stress, and can be configured for high-throughput testing. The fluidic device is adapted to receive a multi-well cell culture plate to which the living cells can be adhered or affixed. In some embodiments, flow channels in the fluidic device are positioned to expose the living cells to moving fluid, and the flow wells are adapted to provide substantially uniform shear stress across the area where the living cells are exposed to the moving fluid.

